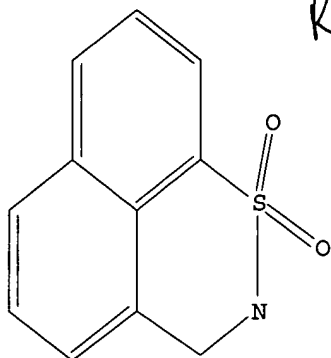


*Ring not isolated!**Broad Search*

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 14:31:32 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 156 TO ITERATE

100.0% PROCESSED 156 ITERATIONS  
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 2371 TO 3869  
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 sss full

FULL SEARCH INITIATED 14:31:41 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 2911 TO ITERATE

100.0% PROCESSED 2911 ITERATIONS  
SEARCH TIME: 00.00.01

19 ANSWERS

L3 19 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
155.42	155.63

FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 14:31:46 ON 14 DEC 2004  
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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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FILE COVERS 1907 - 14 Dec 2004 VOL 141 ISS 25  
FILE LAST UPDATED: 13 Dec 2004 (20041213/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3

L4 7 L3

=> d ibib abs hitstr tot

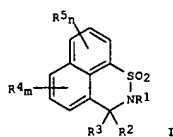
Own  
work

L4 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2002:82062 CAPLUS  
 DOCUMENT NUMBER: 137:370098  
 TITLE: Preparation of naphthothiazine dioxides as positive  
 allosteric AMPA receptor modulators (PAARM)  
 INVENTOR(S): Winter, Karin; Weiser, Thomas; Ceci, Angelo; Klinder,  
 Klaus  
 PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma Kg, Germany  
 SOURCE: Ger. Offen., 12 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

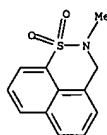
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DE 10123952	A1	20021121	DE 2001-10123952	20010517
US 2003100552	A1	20030529	US 2002-141208	20020508
WO 2002100411	A1	20021219	WO 2002-EP5338	20020515
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EE 200300566	A	20040216	EE 2003-566	20020515
EP 1404340	A1	20040407	EP 2002-750931	20020515
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
BR 2002009796	A	20040601	BR 2002-9796	20020515
JP 2004529980	T2	20040930	JP 2003-503232	20020515
US 2004116412	A1	20040617	US 2003-699374	20031031
US 2004122003	A1	20040624	US 2003-699168	20031031
NO 200305088	A	20031114	NO 2003-5088	20031114
PRIORITY APPLN. INFO.:			DE 2001-10123952	A 20010517
			US 2001-303292P	P 20010706
			US 2002-141208	B1 20020508
			WO 2002-EP5338	W 20020515

OTHER SOURCE(S): MARPAT 137:370098  
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L4 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

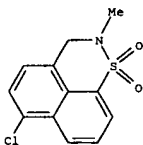


AB Title compds. [I; R1 = H, (halo-substituted) alkyl, SO2H, sulfonylalkyl, sulfinylalkyl, carbonylalkyl, etc.; R2, R3 = H, (halo-substituted) alkyl, NO2, SO2H, sulfonylalkyl, sulfinylalkyl, carbonylalkyl, etc.; or R1R2 = alkylene; R4, R5 = (halo-substituted) alkyl, phenylalkyl, halo, cyano, NO2, SO2H, etc.; n, m = 0-3], were prepared. Thus, 2.21 g N-methyl-1-naphthalenesulfonamide was dissolved in MeSO2OH at 35° followed by treatment with trioxane in CF3CO2H and stirring for 2 h at room temperature to give 2.20 g 2-methyl-2,3-dihydro-1,1-dioxonaphtho[1,8-de][1,2]thiazine. The latter was tested at 0.3-300 µmol against cells expressing functional AMPA receptors and showed good AMPA receptor agonist activity.  
 IT 475466-81-OP 475466-82-1P  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (Preparation of naphthothiazine dioxides as pos. allosteric AMPA receptor modulators (PAARM))  
 RN 475466-81-0 CAPLUS  
 CN Naphtho[1,8-de]-1,2-thiazine, 2,3-dihydro-2-methyl-, 1,1-dioxide (9CI) (CA INDEX NAME)



RN 475466-82-1 CAPLUS  
 CN Naphtho[1,8-de]-1,2-thiazine, 6-chloro-2,3-dihydro-2-methyl-, 1,1-dioxide (9CI) (CA INDEX NAME)

L4 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1999:819372 CAPLUS  
 DOCUMENT NUMBER: 132:49830  
 TITLE: Preparation of naphtho[1,8-de]thiasin-2-yl methyl carbapenem antibacterials  
 INVENTOR(S): Ratcliffe, Ronald W.; Dykstra, Kevin D.; Blizzard, Timothy A.  
 PATENT ASSIGNEE(S): Merck & Co., Inc., USA  
 SOURCE: PCT Int. Appl., 61 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9997242	A1	19991229	WO 1999-US14235	19990623
W:	AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, DE, DK, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
CA 2335510	AA	19991229	CA 1999-2335510	19990623
AU 9947118	A1	20000110	AU 1999-47118	19990623
EP 1090000	A1	20010411	EP 1999-930616	19990623
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, LT, LV, FI, RO			
US 6346526	B1	20020212	US 1999-338646	19990623
JP 2002518498	T2	20020625	JP 2000-555895	19990623
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			WO 1999-US14235	W 19990623

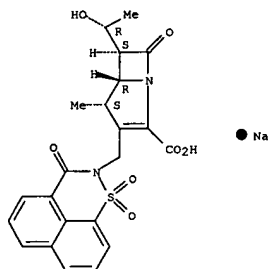
OTHER SOURCE(S): MARPAT 132:49830  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Carbapenem derivs. of formula I [P = H, (substituted) OH, F; R1 = H, Me; M = H, anion, ester group; X = CH2, CO; R = (substituted) Ph, alkenyl, etc.; n = 0-4] are prepared as antibacterial agents (no data). Thus, II is prepared by adding 1,1-dioxo-2,3-dihydronaphtho[1,8-de]thiasin-3-one to III, then deblocking.  
 IT 225531-30-OP 225531-31-7P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (Preparation of naphtho[1,8-de]thiasin-2-yl Me carbapenem antibacterials)  
 RN 225531-30-6 CAPLUS

L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(1,1-dioxido-3-oxonaphtho[1,8-de]-1,2-thiazin-2(3H)-yl)methyl]-6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-, monosodium salt, (4S,5R,6S)- (9CI) (CA INDEX NAME)

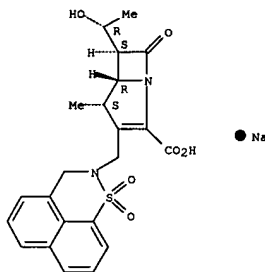
Absolute stereochemistry.



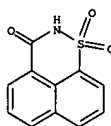
RN 225531-31-7 CAPLUS  
 CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(1,1-dioxido-3-oxonaphtho[1,8-de]-1,2-thiazin-2(3H)-yl)methyl]-6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-, monosodium salt, (4S,5R,6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

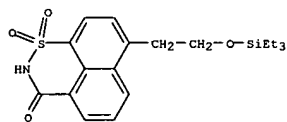


IT 29083-20-3 252908-64-8  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of naphtho[1,8-de]thiasin-2-yl Me carbapenem antibiotics)  
 RN 29083-20-3 CAPLUS  
 CN Naphtho[1,8-de]-1,2-thiazin-3(2H)-one, 1,1-dioxide (8CI, 9CI) (CA INDEX NAME)

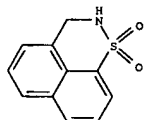


RN 252908-64-8 CAPLUS  
 CN Naphtho[1,8-de]-1,2-thiazin-3(2H)-one, 7-[2-[(triethylsilyl)oxy]ethyl]-, 1,1-dioxide (9CI) (CA INDEX NAME)

L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



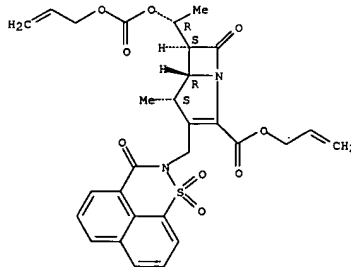
IT 225531-06-6P 225531-17-9P 225531-18-0P  
 252908-65-9P 252908-66-0P 252908-67-1P  
 252908-69-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of naphtho[1,8-de]thiasin-2-yl Me carbapenem antibiotics)  
 RN 225531-06-6 CAPLUS  
 CN Naphtho[1,8-de]-1,2-thiazine, 2,3-dihydro-, 1,1-dioxide (9CI) (CA INDEX NAME)



RN 225531-17-9 CAPLUS  
 CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(1,1-dioxido-3-oxonaphtho[1,8-de]-1,2-thiazin-2(3H)-yl)methyl]-4-methyl-7-oxo-6-[(1R)-1-[(2-propenyloxy)carbonyloxy]ethyl]-, 2-propenyl ester, (4S,5R,6S)- (9CI) (CA INDEX NAME)

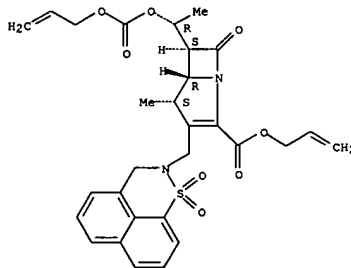
Absolute stereochemistry.

L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 225531-18-0 CAPLUS  
 CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(1,1-dioxido-3-oxonaphtho[1,8-de]-1,2-thiazin-2(3H)-yl)methyl]-4-methyl-7-oxo-6-[(1R)-1-[(2-propenyloxy)carbonyloxy]ethyl]-, 2-propenyl ester, (4S,5R,6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



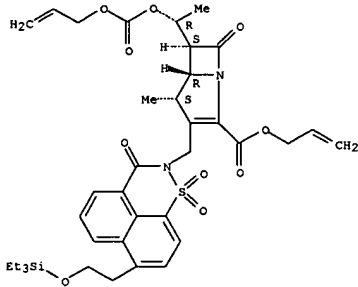
RN 252908-65-9 CAPLUS  
 CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(1,1-dioxido-3-oxo-7-[2-[(triethylsilyl)oxy]ethyl]naphtho[1,8-de]-1,2-thiazin-2(3H)-yl)methyl]-4-methyl-7-oxo-6-[(1R)-1-[(2-propenyloxy)carbonyloxy]ethyl]-, 2-propenyl ester, (4S,5R,6S)- (9CI) (CA INDEX NAME)

12/14/2004

Habte

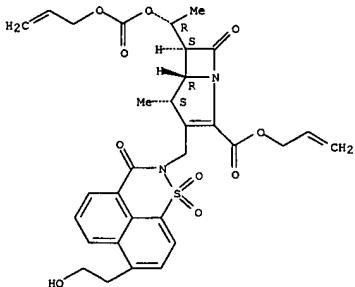
L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

Absolute stereochemistry.



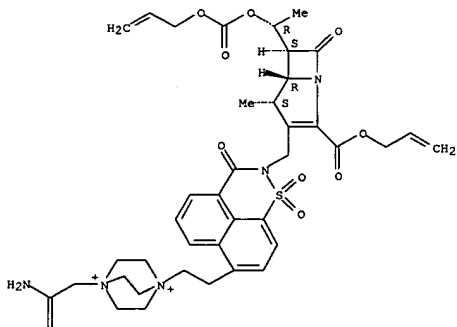
RN 252908-66-0 CAPLUS  
 CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[[7-(2-hydroxyethyl)-1,1-dioxido-3-oxonaphtho[1,8-de]-1,2-thiazin-2(3H)-yl]methyl]-4-methyl-7-oxo-6-[(1R)-1-[[2-propenyloxy]carbonyloxy]ethyl]-, 2-propenyl ester, (4S,5R,6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



PAGE 2-A



CM 2  
 CRN 37181-39-8  
 CMF C F3 O3 S

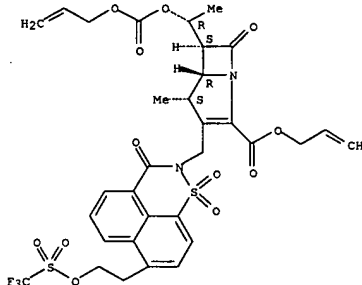


REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
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L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

RN 252908-67-1 CAPLUS  
 CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[[1,1-dioxido-3-oxo-7-[[2-[[[(trifluoromethyl)sulfonyl]oxy]ethyl]naphtho[1,8-de]-1,2-thiazin-2(3H)-yl]methyl]-4-methyl-7-oxo-6-[(1R)-1-[[2-propenyloxy]carbonyloxy]ethyl]-, 2-propenyl ester, (4S,5R,6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 252908-69-3 CAPLUS  
 CN 1,4-Diazoniabicyclo[2.2.2]octane, 1-(2-amino-2-oxoethyl)-4-[2-[2,3-dihydro-2-[[[(4S,5R,6S)-4-methyl-7-oxo-2-[[2-propenyloxy]carbonyloxy]-6-[(1R)-1-[[2-propenyloxy]carbonyloxy]ethyl]-1-azabicyclo[3.2.0]hept-2-en-3-yl]methyl]-1,1-dioxido-3-oxonaphtho[1,8-de]-1,2-thiazin-7-yl]ethyl]-, salt with trifluoromethanesulfonic acid (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 252908-68-2  
 CMF C39 H47 N5 O10 S

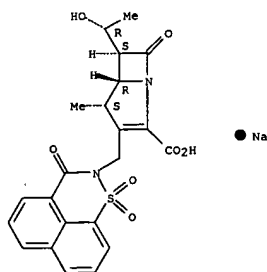
Absolute stereochemistry.

L4 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:193190 CAPLUS  
 DOCUMENT NUMBER: 131:5125  
 TITLE: Synthesis and activity of 2-(sulfonamido)methylcarbapenems: discovery of a novel, anti-MRSA 1,8-naphthosultam pharmacophore  
 AUTHOR(S): Wilkening, R. R.; Ratcliffe, R. W.; Wildonger, K. J.; Cama, L. D.; Dykstra, K. D.; DiNinno, F. P.;  
 Blizzard, T. A.; Hammond, M. L.; Heck, J. V.; Dorso, K. L.; St. Rose, E.; Kohler, J.; Hammond, G. G.  
 CORPORATE SOURCE: Department of Medicinal Chemistry, Merck Research Laboratories, Merck and Co., Inc., Rahway, NJ, 07065-0900, USA  
 SOURCE: Bioorganic & Medicinal Chemistry Letters (1999), 9(5), 673-678  
 PUBLISHER: CODEN: BMCLE8; ISSN: 0960-894X  
 Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB 1 $\beta$ -Me carbapenems substituted at the 2-position with lipophilic, acyclic and cyclic (sulfonamido)methyl groups were prepared and evaluated for activity against resistant gram-pos. bacteria. The 1,8-naphthosultamyl group emerged as a novel, PBP2a-binding, anti-MRSA pharmacophore worthy of further exploration.  
 IT 225531-30-6P 225531-31-7P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (preparation and antibacterial activity of 2-(sulfonamido)methylcarbapenems)  
 RN 225531-30-6 CAPLUS  
 CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[[1,1-dioxido-3-oxonaphtho[1,8-de]-1,2-thiazin-2(3H)-yl]methyl]-6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-, monosodium salt, (4S,5R,6S)- (9CI) (CA INDEX NAME)

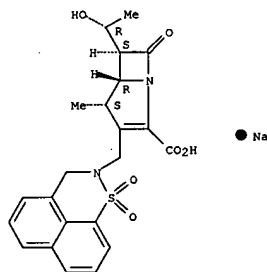
Absolute stereochemistry.

L4 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



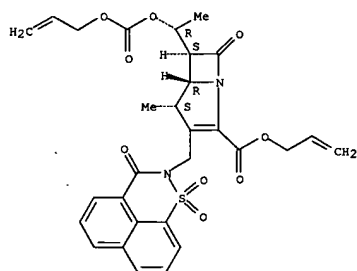
RN 225531-31-7 CAPLUS  
 CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(1,1-dioxido-1,8-de)-1,2-thiazin-2(3H)-yl)methyl]-6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-, monosodium salt, (4S,5R,6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



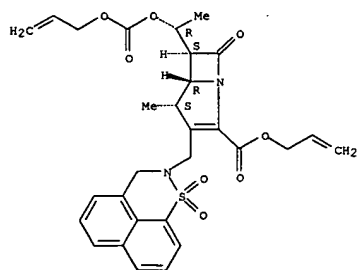
IT 29083-20-3 225531-06-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation and antibacterial activity of  
 2-(sulfonamido)methylcarbapenems)

L4 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



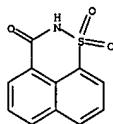
RN 225531-18-0 CAPLUS  
 CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(1,1-dioxido-1,8-de)-1,2-thiazin-2(3H)-yl)methyl]-4-methyl-7-oxo-6-[(1R)-1-[(2-propenyloxy)carbonyloxy]ethyl]-, 2-propenyl ester, (4S,5R,6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

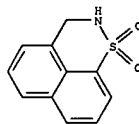


REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR  
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L4 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 RN 29083-20-3 CAPLUS  
 CN Naphtho[1,8-de]-1,2-thiazin-3(2H)-one, 1,1-dioxide (8CI, 9CI) (CA INDEX NAME)



RN 225531-06-6 CAPLUS  
 CN Naphtho[1,8-de]-1,2-thiazine, 2,3-dihydro-, 1,1-dioxide (9CI) (CA INDEX NAME)



IT 225531-17-9 225531-18-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and antibacterial activity of  
 2-(sulfonamido)methylcarbapenems)  
 RN 225531-17-9 CAPLUS  
 CN 1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[(1,1-dioxido-3-oxonaphtho[1,8-de]-1,2-thiazin-2(3H)-yl)methyl]-4-methyl-7-oxo-6-[(1R)-1-[(2-propenyloxy)carbonyloxy]ethyl]-, 2-propenyl ester, (4S,5R,6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

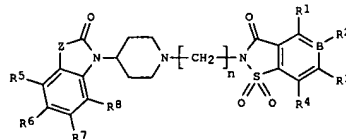
ACCESSION NUMBER: 1998:392146 CAPLUS  
 DOCUMENT NUMBER: 129:54361  
 TITLE: Preparation of benzisothiazolones and analogs as  
 u1C-adrenergic receptor antagonists  
 INVENTOR(S): Huff, Joel R.; Lee, Hee-yoon; Nerenberg, Jennie B.;  
 Thompson, Wayne J.; Bell, Ian M.  
 PATENT ASSIGNEE(S): Merck and Co., Inc., USA  
 SOURCE: U.S., 57 pp., Cont.-in-part of U. S. Ser. No.  
 229,276, abandoned.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5760054	A	19980602	US 1996-722001	19961001
WO 9528397	A1	19951026	WO 1995-US4590	19950413

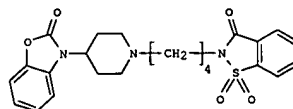
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TT, UA, US, UZ  
 RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1994-229276 B2 19940413  
 WO 1995-US4590 W 19950413

OTHER SOURCE(S): MARPAT 129:54361  
 GI



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II

L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)  
 AB The invention relates to the claimed title compds. I [n = 3-5; B = C or N;

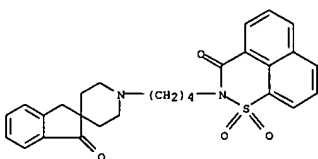
R1, R2, R3, R4 = H, halo, NO2, NH2, (un)substituted alkyl, alkoxy, aryl, heteroaryl, etc.; R5, R6, R7, R8 = H, alkyl, alkenyl, alkoxy; Z = O, S, CH2, NH, NMe) and analogs. Also disclosed are the synthesis and use of the compds. as selective  $\alpha_1$ C-adrenergic receptor antagonists. The primary application of the compds. is in the treatment of benign prostatic hypertrophy (BPH). The compds. selectively relax smooth muscle tissue enriched in the  $\alpha_1$ C receptor subtype without inducing orthostatic hypotension. The compds. provide acute relief of BPH by permitting less hindered urine flow. I and analogs are also useful in combination with human 5 $\alpha$ -reductase inhibitors, providing both acute and chronic relief from the effects of BPH. Approx. 130 specific invention compds. are disclosed. The cloning and use of a cDNA for a human  $\alpha_1$ C adrenoreceptor in an in vitro assay is described. For instance, alkylation of 1-(4-piperidinyl)-3-benzoxazolin-2-one.HCl (prepared in 4 steps) with 2-(4-bromobutyl)-1,1-dioxido-1,2-benzisothiazol-3(2H)-one in the presence of (i-Pr)2NEt in DMF gave 40% title compound II. Selected compds. showed nanomolar or subnanomolar affinity for human  $\alpha_1$ C receptor subtype while showing 30-fold lower affinity for human  $\alpha_1$ A and  $\alpha_1$ B subtypes (no data).

IT 173842-47-2P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of benzisothiazolones and analogs as  $\alpha_1$ C-adrenergic antagonists)

RN 173842-47-2 CAPLUS

CN Spiro[2H-indene-2,4'-piperidin]-1(3H)-one, 1'-[4-(1,1-dioxido-3-oxonaphtho[1,8-de]-1,2-thiazin-2(3H)-yl)butyl]- (9CI) (CA INDEX NAME)



IT 29083-20-3

RL: RCT (Reactant); RACT (Reactant or reagent) (preparation of benzisothiazolones and analogs as  $\alpha_1$ C-adrenergic antagonists)

RN 29083-20-3 CAPLUS

CN Naphtho[1,8-de]-1,2-thiazin-3(2H)-one, 1,1-dioxide (8CI, 9CI) (CA INDEX NAME)

L4 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2004 ACS ON STN

ACCESSION NUMBER: 1995:998362 CAPLUS

DOCUMENT NUMBER: 124:176079

TITLE: Preparation of heterocycles as  $\alpha_1$ C adrenergic receptor antagonists

INVENTOR(S): Huff, Joel R.; Lee, Hee-Yoon; Nerenberg, Jennie B.; Thompson, Wayne J.

PATENT ASSIGNEE(S): Merck and Co., Inc., USA

SOURCE: PCT Int. Appl., 209 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

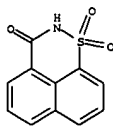
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9528397	A1	19951026	WO 1995-US4590	19950413
W:	AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TT, UA, US, UZ			
RW:	KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
CA 2187767	AA	19951026	CA 1995-2187767	19950413
AU 9523566	A1	19951110	AU 1995-23566	19950413
AU 688498	B2	19980312		
EP 755392	A1	19970129	EP 1995-917565	19950413
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE			
JP 09512016	T2	19971202	JP 1995-527097	19950413
US 5760054	A	19980602	US 1996-722001	19961001
PRIORITY APPLN. INFO.:			US 1994-229276	A 19940414
			WO 1995-US4590	W 19950413

OTHER SOURCE(S): MARPAT 124:176079

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L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)

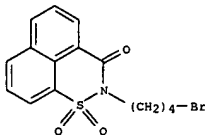


IT 173842-52-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation of benzisothiazolones and analogs as  $\alpha_1$ C-adrenergic antagonists)

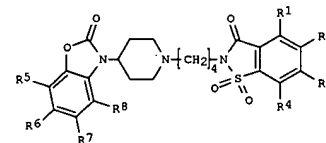
RN 173842-52-9 CAPLUS

CN Naphtho[1,8-de]-1,2-thiazin-3(2H)-one, 2-(4-bromobutyl)-, 1,1-dioxide (9CI) (CA INDEX NAME)

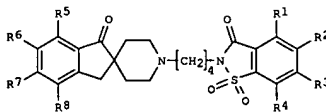


REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)



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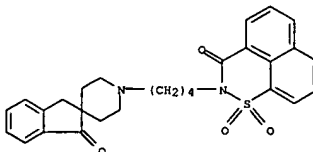
AB Title compds. such as I (R1, R2, R3, R4 = H, NO2, NH2, etc.; R5, R6, R7, R8 = H, alkyl, alkenyl, alkoxy, etc.) and II, effective testosterone reductase inhibitors useful in treatment of benign prostatic hyperplasia, were prepared Alkylation of 1-(4-piperidinyl)-3-benzoxazolin-2-one.HCl with 2-(4-bromobutyl)-1,1-dioxo-1,2-benzothiazol-3(2H)-one in the presence of (i-Pr)2NEt in DMF afforded 40% I (R1-R8 = H). Title compds. are effective at 0.001 mg/kg - 7 mg/kg per day in humans.

IT 173842-47-2P

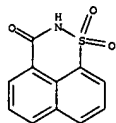
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of heterocycles as  $\alpha_1$ C adrenergic receptor antagonists)

RN 173842-47-2 CAPLUS

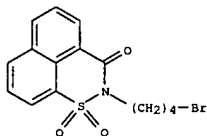
CN Spiro[2H-indene-2,4'-piperidin]-1(3H)-one, 1'-[4-(1,1-dioxido-3-oxonaphtho[1,8-de]-1,2-thiazin-2(3H)-yl)butyl]- (9CI) (CA INDEX NAME)



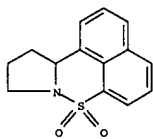
L4 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 IT 29083-20-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of heterocycles as oic adrenergic receptor antagonists)  
 RN 29083-20-3 CAPLUS  
 CN Naphtho[1,8-de]-1,2-thiazin-3(2H)-one, 1,1-dioxide (8CI, 9CI) (CA INDEX NAME)



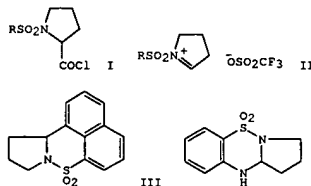
IT 173842-52-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of heterocycles as oic adrenergic receptor antagonists)  
 RN 173842-52-9 CAPLUS  
 CN Naphtho[1,8-de]-1,2-thiazin-3(2H)-one, 2-(4-bromobutyl)-, 1,1-dioxide (9CI) (CA INDEX NAME)



L4 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L4 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1980:110942 CAPLUS  
 DOCUMENT NUMBER: 92:110942  
 TITLE: New synthesis of sultams via readily generated iminium ions  
 AUTHOR(S): Adesogan, E. Kayode; Alo, Babajide I.  
 CORPORATE SOURCE: Dep. Chem., Univ. Ibadan, Ibadan, Nigeria  
 SOURCE: Journal of the Chemical Society, Chemical Communications (1979), (16), 673-4  
 CODEN: JCCCAT; ISSN: 0022-4936  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 92:110942  
 GI



AB N-Arylsulfonylpropyl chlorides I (R = Ph, p-MeC6H4, o-O2NC6H4, α-naphthyl) reacted spontaneously with F3CSO3Ag at room temperature to give the iminium salts II. II (R = α-naphthyl, o-O2NC6H4) were readily converted into the sultams III and IV, resp., III by refluxing II (R = α-naphthyl) in CCl4 and IV by treatment of II (R = o-O2NC6H4) with aqueous NH3 followed by cyclization with iron in AcOH.  
 IT 72923-03-6P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 72923-03-6 CAPLUS  
 CN Naphtho[1,8-de]pyrrolo[1,2-b][1,2]thiazine, 9,10,11,11a-tetrahydro-, 7,7-dioxide (9CI) (CA INDEX NAME)

L4 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1971:463679 CAPLUS  
 DOCUMENT NUMBER: 75:63679  
 TITLE: Preparation of substituted 1,2-benzisothiazolin-3-one  
 1,1-dioxides (o-benzoic sulfinimides)  
 AUTHOR(S): Lombardino, Joseph G.  
 CORPORATE SOURCE: Med. Res. Lab., Pfizer Co., Inc., Groton, CT, USA  
 SOURCE: Journal of Organic Chemistry (1971), 36(13), 1843-5  
 CODEN: JOCEAH; ISSN: 0022-3263  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 75:63679  
 GI For diagram(s), see printed CA Issue.  
 AB N-(tert-Butyl)benzenesulfonamides (I) are converted to 1,2-benzisothiazolin-3-one 1,1-di-oxides (II) by lithiation (BuLi), carbonation, and cyclization (polyphosphoric acid). N-Benzyl analogs of the I are not debenzylated.  
 2,3-Dihydro-3-oxonaphtho[1,8-de][1,2]thiazine 1,1-dioxide (III) is prepared by the same series of reactions from 1-ClOH7SO2NHCMc3.  
 IT 29083-20-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 29083-20-3 CAPLUS  
 CN Naphtho[1,8-de]-1,2-thiazin-3(2H)-one, 1,1-dioxide (8CI, 9CI) (CA INDEX NAME)

